ENHANCED SWITCHOVER FOR MPLS FAST REROUTE

Abstract of the Disclosure

A Fast Reroute implementation where switchover time to backup tunnels upon failure of a protected network element is independent of a number of entries corresponding to forwarding equivalence classes forwarding over LSPs using that element. During normal operation of a packet forwarding device, adjacency information for a received packet is retrieved from a forwarding table based on a look-up of the packet's forwarding equivalence class. Upon failure of a link or node, the appropriate entries in this forwarding table are rewritten to implement the switchover to preconfigured backup tunnels. The switchover is effective even before the rewrite process has completed. Upon detection of the failure, forwarding processing shifts to a fix-up mode. During the fix-up mode, the look-up to the previously mentioned forwarding table is followed by a look-up to a backup tunnel adjacency table based on a pointer retrieved from the forwarding table. Operations relating to use of this backup tunnel adjacency table increase forwarding time somewhat but only during the special fix-up mode.